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*AF/1714*

IN THE UNITED STATES PATENT OFFICE

In re: Stephen Weinhold et al.

: Art Unit: 1714  
: Examiner: K. Wyrozebski Lee  
:  
: Docket No.: 71363/US02  
: Date Mailed:

Date filed: July 3, 2001

Serial No.: 09/898,621

Confirmation No.: 2318

Title: Polyester Compositions For Hot-Fill Containers

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**CERTIFICATE OF MAILING 37 CFR 1.8(a)**

I hereby certify that this correspondence and any items identified as being included herewith is/are, on the date shown above, being deposited with the United States Postal service with sufficient postage as first class mail, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*Kristi D. Huff* 3/25/04  
Kristi D. Huff

**Reply Under 37 CFR §1.111  
INTRODUCTORY COMMENTS**

Sir,

In response to the Official Office Action mailed January 15, 2004, and having a three (3) month shortened statutory period for reply, Applicants respectfully request reconsideration or further examination of the claimed invention and consideration of the remarks herein.

### Rejections under 35 U.S.C. § 103

Claims 1-8 and 16-20 were rejected under 35 U.S.C 103(a) as being unpatentable over Wu et al. (US 5,925,710) (hereinafter referred to as "Wu"). Applicants respectfully traverse this rejection for the reasons submitted below.

In response to the Applicants' response mailed on 10/14/2003, the Examiner writes in section 5(a) concerning Wu that the term "at least 65%" means that the "amount of EG can be as little as 65% and also as much as 95%". In fact, in the rejection mailed on 8/1/2003, the Examiner referred to the example in Wu stating that the example utilizes "95 mole % of EG, 1.4 mole% of DEG and the remaining balance (to add up to 100%) would belong to the second preferred monomer in the mixture, CHDM (that would be 3.6 mole%) all of which lie squarely in the middle of the amount ranges of the present invention". Applicants respectfully disagree with the Examiner conclusions for the following reasons:

(1) There is no indication in the example that the amount of ethylene glycol is 95%. In one part of Wu's disclosure, it states that ethylene glycol is at least 65%, preferably at least 70%, even more preferably at least 75%, most preferably at least 95% (column 4, lines 13-17). However, in the example, Wu discloses only that DEG is present in 1.4 weight percent, leaving one to assume that EG makes up the difference. Applicants, respectfully point out that the Examiner was incorrect when it was stated that Wu's example had DEG at 1.4 mole percent when actually the units of measure in the example was weight percent. When the conversion is made assuming EG makes up the balance, DEG is present in only about 0.8 mole percent in the example given by the

examiner, which falls outside the Applicants range. Moreover, Wu is silent about CHDM in the example given. However, it should also be pointed out that the starting composition is not necessarily the ending composition of a polymer. Therefore, the example does not disclosure Applicants' composition.

(2) There is no indication that CHDM was the second monomer or even if a second monomer was even used in the example. The example discloses that 1.4 weight percent DEG was utilized, therefore it could be assumed the remainder (98.6 wt%) was EG. Wu gives a large list of modifying diols in the specification and states that mixtures can be used. Wu does specify that DEG and CHDM or mixtures of the two are preferred in another part of the specification, but no indication in the example is given that anything other than DEG was used.

(3) Even if CHDM was picked as another comonomer, there is no indication that it is present in the Applicants' concentration range of 1-4 mole%. For example, ethylene glycol could be 70 mole%, DEG 4 mole% and CHDM could make up the balance or 26 mole%.

The number of iterations and combinations of comonomers and concentrations are staggering in Wu's disclosure. In short, Applicants submit that there is no teaching in Wu to utilize 1-4 mol% DEG and 1-4 mol% CHDM. Applicants' disclosure specifically states that "The present invention pertains to certain polyester compositions which are particularly suitable for the manufacture of heat set-formed articles, such as containers" (page 1, paragraph 2, lines 1-3). Wu is silent on heat set container characteristics. Applicants further states that "examples clearly show that the composition of the present invention produced preforms which can be heated to higher temperature without

forming objectionable levels of crystalline haze than similar compositions which are outside the scope of the present invention” (page 21, paragraph 47, lines 8-11). In other words, there is no motivation for a person skilled in the art to obtain Applicants’ composition particularly suitable for producing heat set containers based on Wu’s disclosure.

Moreover, in the process claims, Applicants’ invention is directed specifically to hot set containers. Hot fill containers must be heat treated or “heat-set” to prevent unacceptable shrinkage or deformation of the polyester container during the hot-fill process. Heat setting requires the use of heated blow molds and also requires the slowing of the blow molding process relative to the typical speed used for non-heat-set containers to obtain sufficiently long contact time between the blow-molded container and the hot-blow mold.

In short, the present invention is not only a composition particularly suitable for, but also a process for manufacture of hot-fill containers. Wu is completely silent about the special characteristics required for hot-fill containers.

Applicants respectively submit that the only way one could arrive at the specific concentration of DEG and CHDM from the disclosure in Wu is by utilizing the Applicants’ invention as a template to pick disclosure from Wu to obtain the desired combination and concentrations and thus the desired results of the Applicants’ invention.

In re Fritch, 972 F.2d. 1260, 23 U.S.P.Q. 2d 1780 (Fed. Cir 1992) states “[I]t is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered

obvious.....This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among the isolated disclosures in the prior art to deprecate the claimed invention".

In addition, though it might be possible to modify Wu's invention to operate like the Applicants' invention, there is no suggestion or teaching in Wu's disclosure to do so.

Although a prior art device "may be capable of being modified to run the way [the patent Applicants' apparatus is claimed, there must be a suggestion or motivation in the reference to do so"(In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)).

Moreover, Applicants' invention has specialized characteristics for hot-filled containers with unexpected results not obtained in Wu's invention. In Applicants' disclosure, it states that "the improved polyester composition of the present invention may be injection molded to produce container preforms which are capable of forming heat-set containers having low visual haze and less than 3% volume shrinkage....." (page 4, paragraph 11, lines 1-4). In Interconnect Planning Corp V. Feil (774 F.2d. 1132, 227 U.S.P.Q. 543 (Fed. Cir. 1985)), the court states that "It is error to reconstruct the patentee's claimed invention from the prior art by using the patentee's claimed invention as a blueprint. When prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight obtained from the invention itself. It is critical to understand the particular results achieved by the new combination." The unexpected results obtained by Applicants' invention are a process particularly suitable for producing hot fill containers having low shrinkage or deformation of the polyester during the hot-fill process.

Concerning the inherent viscosity and blow molding temperature in section 5(b), the Examiner writes that "Such would have been further supported by the fact that the blow molding temperature and reheat temperature of the polyester of Wu is within the same range as the temperature recited by the claims of the present invention". Applicants wish to respectfully point out that when Wu states "if the temperature is too cool (generally below 100°C) blow molding will cause cold stretching of the polymer", Wu is specifically referring to the preform temperature at the time the mold is blown. In Applicants' invention, the blow molding temperature is referring to the temperature of the mold. Moreover, because the container is heat set not only is the preform heated, but the mold is also heated. In the disclosure, Applicants state that "preforms are blown into a hot mold, usually at a mold temperature between 90 and 160°C....The hot mold is essential for manufacturing of a container having good hot-fill stability" (page 16 & 17, paragraph 36, lines 18-22). Wu is silent about the actual mold temperature. Wu speaks only in terms of preform temperature since Wu's invention is not directed to hot fill containers having low shrinkage or deformation of the polyester during the hot-fill process.

In Applicants' invention, the process claims are directed specifically to the process utilizing a hot blow mold. Applicants wish to point out to the Examiner claims 16, 17, and 20 where specific temperatures of the mold are stated. In contrast, Wu only specifies a preform temperature.

In regards to section 5(c), Applicants previously stated that there was no indication of which additional modifying diol was used in the example. Only DEG was stated, and the only way to obtain Applicants' exact composition particularly suitable for

hot-fill containers would be to use information gleaned only from the Applicants disclosure. Wu disclosed numerous modifying diols with a large range of possible concentrations. However, the only way to obtain the Applicants' concentration of DEG (1-4 mol%) and CHDM (1-4 mol%) would be to use hindsight reconstruction to pick and choose among disclosures within Wu to obtain Applicants' invention that is directed to hot fill containers.

In regard to section 5(d-g), in view of arguments previously on record and the Applicants response to sections 5(a-c) concerning Wu, Applicants respectfully submit that the combination of Tindale with Wu adds nothing further to Wu such that all the claim limitations of the present invention are taught or suggested. Furthermore, there is no suggestion or motivation contained in Wu or Tindale et al. to modify the references to arrive at the present invention.

In view of arguments previously on record and the Applicants' response to sections 5 (a-f), Applicants respectfully submit that claims 1-8 and 16-20 are patentably distinguishable over the cited references.

Claims 6-8 were rejected under 35 U.S.C 103(a) as being unpatentable over Wu as applied to claims 1-8, 16-20 and further in view of Tindale et al.(US 5,419,936).

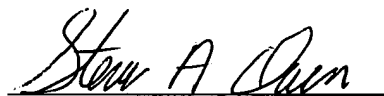
In view of arguments previously on record and the Applicants' response to sections 5 (a-f), Applicants respectfully submit that claims 6-8 are patentably distinguishable over the cited references.

Claims 9-15 were rejected under 35 U.S.C 103(a) as being obvious over Wu (U.S. 5,925, 710) or Wu (5,925, 710) in view of Tindale et al.(U.S. 5,419,936) as applied to claims 1-8, 16-20, either one of which further in view of Pruett et al. (U.S. 4,617,374).

In view of arguments previously on record and the Applicants' response to sections 5 (a-f), Applicants respectfully submit that claims 9-15 are patentably distinguishable over the cited references.

In view of the above, Applicants respectfully submit that the claimed invention is patentably distinguishable over the cited references of Wu (US 5,925,710), Tindale (US 5,419,936), and Pruett et al. (US 5,925, 710) either alone or in any combination and respectively request that the 35 U.S.C. § 103(a) rejection of claims 1-20 be withdrawn. Applicants further request that the application be passed to allowance at the Examiner's earliest convenience.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Steven A. Owen", is written over a horizontal line.

Steven A. Owen  
Reg. No. 50,355